

(Demo) Annual Narrative



FWSANV-0180

REPORT OF ACTIVITIES 78

FISCAL YEAR 1937 79

MALHEUR MIGRATORY WATERFOWL REFUGE 80

BUREAU OF BIOLOGICAL SURVEY

July 30, 1937

U. S. DEPARTMENT OF AGRICULTURE
Bureau of Biological Survey

AM - Reports
Annual

Burns, Oregon
July 31, 1937

CHIEF, Bureau of Biological Survey
U. S. Department of Agriculture
Washington, D. C.

Dear Sir:

Reference is made to Mr. Elmer's memorandum of July 15, wherein is stated a request for the submission of an annual report covering the activities of all Refuges for the Fiscal Year 1937.

Herewith enclosed please find Report of Activities for the Malheur Migratory Waterfowl Refuge for the Fiscal Year 1937. We have routed this direct to your office to avoid delay and have sent our Regional Director a copy thereof.

It is hoped that this report reaches you in good time and that it fulfills your expectations.

Yours very truly,

J. C. Scharff
Acting Superintendent
Malheur Migratory Waterfowl Refuge

FA

Enc:

CLASS OF SERVICE

This is a full-rate Telegram or Cablegram unless its deferred character is indicated by a suitable symbol above or preceding the address.

WESTERN UNION

R. B. WHITE
PRESIDENT

NEWCOMB CARLTON
CHAIRMAN OF THE BOARD

J. C. WILLEVER
FIRST VICE-PRESIDENT

SYMBOLS

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| DL = Day Letter |
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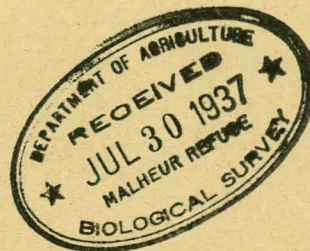
JOHN SCHARFF

MALHEUR REFUGE BURNS ORG

EXPEDITE ANNUAL REPORT REQUESTED DIVISION MEMORANDUM DATED JULY FIFTEENTH

ELMER

3P



Phoned to _____

Time _____

3:24 PM By *Q*

Fronterspiece



Malheur Migratory Waterfowl Refuge
Sod House Headquarters

INTRODUCTION

During the past year, the Malheur Migratory Waterfowl Refuge has really found its stride in the race against time and factors which have seriously menaced the future of the wildlife of our continent. Without doubt, this Refuge has produced unquestionable evidence to substantiate the contention that efforts toward the conservation of the Nation's wildlife resources have not been in vain.

"Well begun is half done", as an adage is yet applicable in this case, and by such token, we believe that although we have a long way to travel yet in the development of Malheur, one of the most important links in the Bureau's Refuge system, without doubt it is a fact that this Refuge is "Well begun" if not "half done"!

It is our opinion that we can measure our achievements in an intangible manner, that is, through an evaluation of wildlife's reactions to our efforts.



Unit 8.

Nesting Area

USE OF THE MALHEUR MIGRATORY WATERFOWL REFUGE BY WILDLIFE

The use of this Refuge by wildlife cannot be of course measured in exact figures and its benefits to the migrant and to the resident cannot be tangibly ascertained, however, all available evidence points to a manifold increase in the past year over that of the previous year in the utility of this area to all migrating and resident species.

Waterfowl: All available evidence clearly bespoke of the fact that this flyway was travelled by far greater numbers of migratory waterfowl during the last autumn and the spring just past than during the same periods a year previous. Accordingly, the importance of this Refuge as a resting and feeding haven was greatly increased and it is safe to say that as our area is made more and more adaptable to the demands of the various species of ducks, geese and other migrants, its importance as a migration stop-over will undoubtedly become much more apparent.

Our winter resident waterfowl population was very small--this because of the most severe winter in many years. With the thermometer hovering from zero to forty-two degrees below for a period of more than a month, and the ground covered in many places with deep snow, it was almost impossible for our usual waterfowl population to exist, especially in the fact that practically all open water was frozen over.

The effects of winter on our waterfowl numbers were made evident by the annual count which was taken January 23 and 24, 1937. The few birds which remained here all winter were at this time bunched about the few warm springs and open water areas where some food was available and varying protection was afforded from the fierceness of the winter.

The results of our waterfowl census were:

| | | | |
|------------|-----|---------------|---|
| Mallard | 244 | Gadwall | 2 |
| G. W. Teal | 68 | Am. Goldeneye | 2 |
| Baldpate | 18 | Lesser Scaup | 1 |
| Pintail | 1 | | |

The above totals some 334 ducks and it is safe to say that this number comprises to a fairly large percentage our winter duck population for the season of 1936-37, and although no geese whatsoever were sighted on the days of the count, several hundred Canadas were seen a few days later in a willow thicket.

Late winter in this area saw many species of waterfowl returning for an early start, either to locate nesting sites here or for a continuance of their journeys to the northern portions of this continent for whatever attractions were offered.

Following are some of the first arrivals noted:

| <u>Date</u> 1937 | <u>Species</u> | <u>Approx</u> <u>Quantity</u> |
|---------------------|---------------------|----------------------------------|
| 2/13 | Canada Geese | 18 |
| 2/18 | Pintails | 27 |
| | Canada Geese | 100 |
| 2/21 | Whistling Swan | 19 |
| 2/25/37 | White-fronted Geese | 50 |
| 2/24/37 | Snow Geese | 34 |
| 2/27/37 | Cinnamon Teal | 2 |

Mass arrivals by flocks were a little later and were observed as follows:

| | | |
|---------|--|--------|
| 3/3/37 | Whistling Swan | 100 |
| | Canada Geese | 600 |
| | Snow Geese | 1,500 |
| | White-fronted Geese | 300 |
| | Ducks of many species, predominately Pintails | 25,000 |
| 3/9/37 | Snow Geese | 20,000 |
| | Canada Geese | 2,000 |
| | White-fronted Geese | 3,000 |
| | Ducks, of many species predominately Pintails | 60,000 |
| 3/14/37 | Green-winged Teal | 50 |
| 3/15/37 | Snow Geese | 30,000 |
| | White-fronted Geese | 5,000 |
| | Canada Geese | 6,000 |
| | Whistling Swan | 400 |
| | Ducks, many species predominately Pintails | 75,000 |

Due to press of other work, it was impossible to devote any amount of time to observations except those possible along with other duties, therefore, our first arrival list is rather limited.

A few other early arrivals at Malheur Refuge this spring were as follows:

| | | |
|---------|--------------------|----|
| 2/24/37 | Killdeer | 2 |
| 2/25/37 | Sandhill Cranes | 2 |
| 3/15/37 | Meadowlarks | 20 |
| " | Gulls | 18 |
| 3/31/37 | Long-billed Curlew | 3 |
| 4/10/37 | American Egret | 1 |
| 4/21/37 | Arkansas Kingbird | 1 |

Upland Game Birds: A survey of the upland game bird situation made during the extremely cold weather of January and February, disclosed the fact that several large coveys of quail, both Mountain and California, were completely destroyed by the winter conditions. In the autumn of 1936, coveys of these birds were in sight in several places within the boundaries of the Refuge, however, with the passing of winter and the arrival of summer weather, we have not seen a single quail, and accordingly, it is the opinion that all perished because of the intense cold and lack of cover and proper food.

The Ruffed Grouse which were planted here in 1936 and which used the rose thickets and willow patches for their haunts, are believed to have also succumbed to the fierceness of the last winter, or perhaps were thus weakened and became easy prey for predators. No evidence whatsoever of these noble upland game birds has been found since they were last seen during the late fall.

Likewise, many of our limited numbers of Sage Hen also are missing this spring and summer, leading one to believe that they too met a wintry death.

Ring-necked Pheasants and Hungarian Partridges evidently wintered quite well. On January 23 of this year, 18 pairs of pheasants were seen in the P Ranch area of this Refuge, and "Huns" were sighted from time to time. The present summer population of both these two species points to the fact that even in the face of last winter's adversity, these upland game birds wintered well and produced an average increase of young this spring. We did, however, maintain three feeding stations for pheasants and partridges throughout the severest of the winter. It is estimated that we now have 50 pairs of Ring-necked Pheasants and an equal number of Hungarian Partridge.

Big Game Mammals: Mule deer were common in all parts of the Refuge during the entire past year. On January 11, 1937, 28 deer were seen on the east side of the P Ranch area, and lesser herds

Typical Uses



A Brood of Ducklings in Each Picture--Examples of
A Most Productive Hatching Season

have been in evidence many times this spring and summer. It is estimated that at least 200 mule deer use the Refuge, either partially or wholly during the year. We have one of the best habitats possible for this game mammal in our P Ranch area where between the canals and river has been created one of the most natural of areas by simply keeping all cattle out and allowing the vines and willows to spread in a natural manner.

Antelope may be seen either within the Refuge fences or adjacent on the Public Domain. It is not uncommon for small herds of from six to twelve in number to bound over the sagebrush and meadows as they are approached by an automobile. Approximately 50 antelope frequent this reserve.

Waterfowl Nesting Use of Malheur Refuge:

The creation of lagoons, ponds, dykes, and canals in all parts of the Refuge has indeed proven an incentive for the waterfowl to utilize practically all meadows and formerly dry fields as nesting areas. Without doubt, this year has seen a much more widespread nesting utilization of the entire Refuge than any previous season within this drouth cycle. From the P Ranch site at the south end to the Malheur Lake at the north end, thousands of pairs of ducks of all species which breed in this locality, were scattered throughout the Refuge in their efforts to make nests and raise their young.

A brood survey of small areas of several units was conducted in June and early July of this year, and on a basis of 300 broods actually counted, the average number of young per brood was 8.3. This survey included broods of the following species:

| | |
|-----------|-------------------|
| Mallard | Cinnamon Teal |
| Gadwall | Blue-winged Teal |
| Redhead | Ruddy Duck |
| Spoonbill | Green-winged Teal |
| Pintail | |

For the first time on record, Canvasback ducks were found this summer to be nesting on the Malheur Refuge in the P Ranch area. No other nesting of Canvasbacks in this area has been previously reported. The newly made record was based on a brood of seven young.

It is very evident throughout the entire Refuge that we have many more broods of all locally nesting species this year than any previous year since the acquisition of the Blitzen Valley. The ducklings, from downy young to the noisy flapper, are all enthusiastic toward the conditions as created for their propagation on this Refuge.

Canada Geese also enjoyed a very fine hatch this season. The first recorded brood of the year was seen near the Sod House Headquarters on April 23 and contained eight young.

Many broods of geese were on the wing by July 1 of this year and now with their honking tactics they make themselves known all over the area. Recently seen congregations of this year's production of Canada Geese, as well as old birds indicate that there are many thousands of them scattered throughout the Blitzen Valley and Malheur Lake areas.

Nesting Use by Other Than Waterfowl: In addition to the waterfowl as mentioned nesting in this area, we have had the company of at least two colonies of nesting American Egrets, as well as the worried tactics of several pairs of Long-billed Curlews as their nesting sites were approached. Phalaropes, Willets, Wilson's Snipe, Gulls, Terns, Grebes, Herons, and Cranes all contributed to the propagation of bird life on the Malheur Refuge for 1937. Besides these, we have also our regular quota of nesting hawks, Swainson's, Redtail, Marsh, Roughleg, and others.

Along any of the banks of canals, or river, or in the crevices of the rimrocks, are found the nests of the Horned Owl. His slow methodical flight may be seen from practically any point of the Refuge, and there ever exists a question as to his motives, especially when his nest is located strategically close to some of the best waterfowl nesting areas.

We also have the Long-eared Owls, Short-eared Owls, and Burrowing Owls, nesting here. Our meadows provide quality nesting sites for the Short-eared species while the Burrowing Owl chooses the barren sagebrush hillsides or other open dry areas for his home making.

The ever-present Magpie and Raven in their great numbers have contributed their bit to the bird life of this region. They are both year-around residents with their never-ending adaptability for predaceous acts.

Three species of blackbirds also nest in this locality--Brewer's, Yellow-headed, and Red-winged. In addition, there are many other species of small insectivorous and other birds.

Water Development



Looking East in Unit 8. Artificial Pond

VARIED USES MADE OF MALHEUR REFUGE

The areas being developed in the Blitzen Valley fortunately are such that it is not necessary to construct artificial islands and shelters. Where dykes have been constructed to impound the water and spread it over the Valley areas, it has been found that a large number of islands have resulted from such development work, and the natural cover is ample to provide all necessary shelter for use by all birds and mammals frequenting the area. It is gratifying to say the least, to see the increased numbers of birds using the facilities which have been provided by our early development work.

During the brief administration of this area as a Refuge, no opportunity has been avoided toward making a study of the haying and grazing situation with the idea in mind of preparing, insofar as possible, a detailed economic use plan of the Refuge in a manner that will in no way detract from the major objectives of providing nesting, resting, and feeding conditions for migratory waterfowl and upland game. Owing to special concessions which were granted in the purchase contract, the best management could not be practiced, nor has the revenue received from our grazing resources been as great as it will be in the future. Somewhat over thirty thousand animal months' use was made of the Refuge area during the 1936-37 season, and approximately six thousand tons of hay were cut and stacked besides several hundred acres of meadows which were mowed and bunched for livestock use. In addition to the above, six thousand bushels of grain were threshed under permit from a little over ninety acres of bottom land. This grain stubble provided an excellent feeding place for geese, ducks, and Sandhill Cranes, far into the winter season.

Only a limited number of campers frequented the Refuge. Fishermen were more numerous, fishing under special permit being allowed on the Refuge for a distance of about seven miles of the Blitzen River and Bridge Creek within the boundaries of the Refuge. A state closure has been made on the balance of the Refuge waters, and as a result of this restriction, those parts of the streams which are open to fishing are well stocked at all times. The Rainbow Trout is the principal species taken on this area.

No hunting whatever is permitted on any of the Refuge lands.

During the past year an increasing number of visitors has been received at the Refuge. Forty-odd members of the Portland Mazamas Club paid the Refuge a visit and camped one night in the Diamond area. Oregon State Agricultural College and the Grazing Service each have been well represented on the visitors' list.

During a recent Forest Service Supervisor's meeting in Burns, Oregon, a delegation of about sixteen Forest officers from Regions Five and Six visited the area. Also, recently the Refuge has been visited by people from Chicago, Washington, D. C., and Texas.

The recreational use made of the Refuge has consisted mostly of local people picnicking in the vicinity of the P Ranch, but to encourage and concentrate the camping and recreational use of the Refuge, a camp ground is being provided at the south end of the P Ranch area where camping facilities, such as tables, stoves, toilets, and garbage pits, are being provided. It is quite evident that the recreational use of this Refuge will increase to a large degree within the next few years. It is our opinion that guide service should be made available, beginning next year, to handle this use made by the general public. It is estimated that approximately six hundred man days recreational use was made of the Refuge this season.

PLANTINGS

In 1936 a nursery was provided and a really worthwhile showing was made in getting trees and shrubs started for planting at the various headquarters sites and other places on the Refuge. This nursery was closely worked and watched during the winter, but under a heavy covering of snow, the field mice started working and as a result, approximately 80 per cent of the nursery was destroyed. A further loss was sustained due to the extremely cold weather which lasted over a period of almost six weeks.

In spite of this loss, however, ample trees were available for plantings at the Refuge Headquarters, and the following trees and shrubs were planted at the Sod House site:

| | | | |
|----|------------------|----|-------------------|
| 48 | Carolina Poplars | 1 | Mulberry |
| 28 | lilacs | 2 | White Fir |
| 11 | Black Locust | 2 | plum |
| 10 | Caraganas | 2 | Mock Orange |
| 5 | Cottonwoods | 52 | Virginia Creepers |
| 4 | Chinese Elm | | |

In addition to the above, something over three hundred gladioli bulbs and a wide variety of perennial flowering plants were set out in permanent beds.

To guard against a similar happening as the one mentioned above, a new nursery has been created in a much better location with a deer-tight and a rabbit-proof fence. Already some planting has been performed in this new location. This planting consisted of the following approximate numbers:

500 Caroline Poplar cuttings
300 Yellow Willow cuttings
2,000 Wild Plum seeds

and the following coniferous trees:

50 Mugho Pine
200 Douglas Fir
25 Norway Spruce
25 Ingelman Spruce
25 Concolor Fir
200 Colorado Blue Spruce
200 Pinon Pine

By the time this new nursery was well under way, the season was somewhat late, but we are in a position to do a worthwhile job next year.

To provide against a recurrence of mouse infestation, we have the new nursery located so that a strip can be clean cultivated around the entire border, and poison stations can be provided and proper precautions taken.

Plantings of approximately 300 acres of barley have been made and prospects for a crop are good. A number of small acreages were seeded in the upper Valley, strategically located from the standpoint of cover for winter use of the Ring-necked Pheasant and other upland game birds.

In Unit 8, 931 pounds of wild millet, seventy pounds of smartweed, and 1000 pounds of bayonet grass were sown, which resulted in an excellent stand. It is pleasing to see the manner in which wild millet is taking hold and the amount of food it is producing. We believe it an excellent prospect for this area.

Forty-one thousand two hundred six native willows were also planted in this unit as a protective against erosion of the roads and dykes.



One of the Most Excellent
Barley Fields in Blitzen
Valley

PREDATOR CONTROL

Every effort has been made by Refuge personnel toward the control of coyotes within and adjacent to the Refuge. Approximately 12 of these wily predators have been killed by our personnel during the past winter and spring. The Game Management Division of the Bureau has maintained a trapper here at intervals and his efforts have accounted for about 75 coyotes.

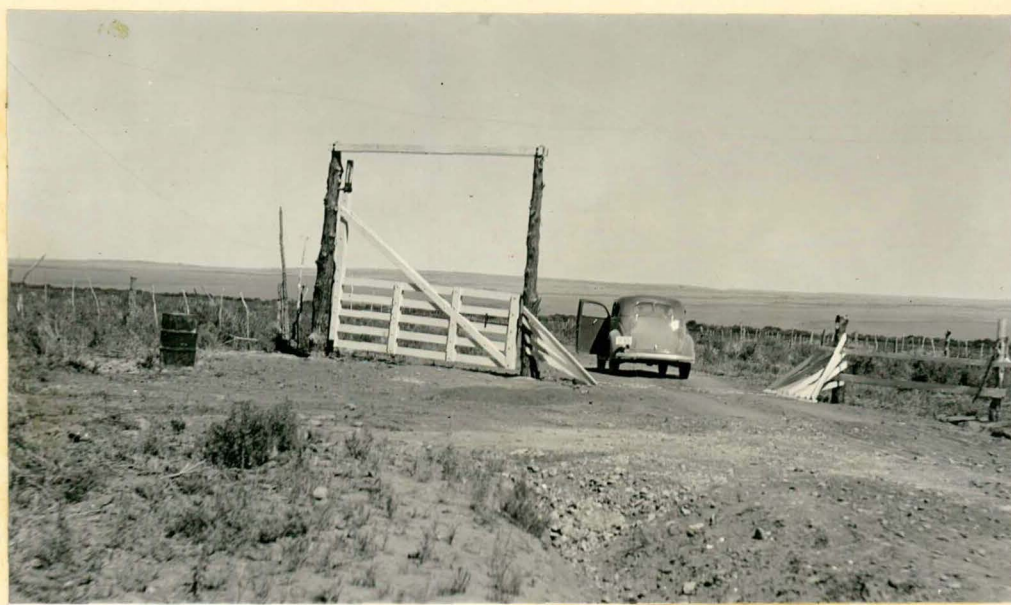
Bob cats and wild domestic cats account for some numbers of our young waterfowl from time to time, as does the striped skunk. Nine domestic cats which have gone wild have been killed and accidental death has met four skunks on the roads within or bordering the Refuge. It is believed that the skunk is quite destructive of all species of small, immature birds, and control measures will be perhaps necessary in the future.

In an effort to curb the devastation of our bird nests, control measures were initiated against the raven population of the Malheur this spring. As a result of a poisoning program which was carried out, approximately 120 ravens were picked up dead and all indications are that this was a very small percentage of the total ill-fated birds. Approximately 35 of these birds were shot by personnel and nest robbing resulted in the killing or capture of about 50 ravens.

Refuge Improvements



Patrol Road--Rocky Ford Lane



Malheur Standard Gate & Cattle Guard

REFUGE IMPROVEMENTS

The improvements constructed during the past year have been many and varied. The Headquarters Buildings group, consisting of the superintendent's residence, clerk's residence, Office building Service building, barn, and pump house was completed sufficiently for occupancy. At Buena Vista the standard C type house of stone veneer construction was completed and is ready for occupancy. The P Ranch renovation job consisting of the rehabilitation of the old P Ranch house into a modern duplex has progressed well and will be ready for occupancy not later than August 1.

In addition to the above, the following improvements are listed:

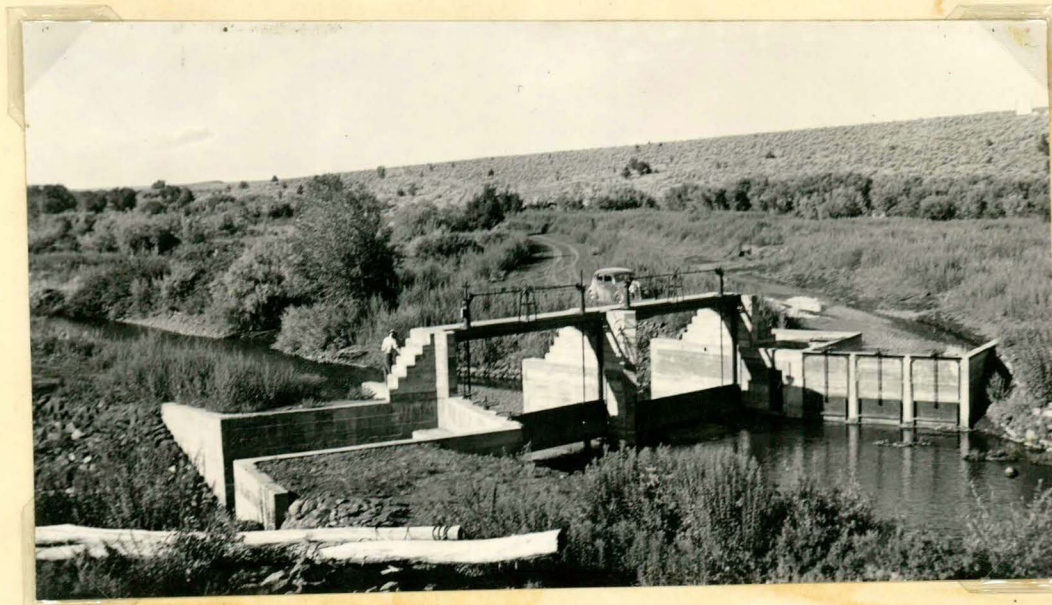
| <u>Improvement</u> | <u>Quantity</u> | <u>Unit</u> |
|----------------------------|-----------------|-------------|
| Lookout Tower | 1 | each |
| Bridges, vehicle | 20 | each |
| Dams, diversion, concrete | 1 | each |
| Fills, earth | 138 | cu. yds. |
| Fences, 5 strand barb wire | 95 | miles |
| Levees and dykes | 150,966 | cu. yds. |
| Sewer Lines | 2,507 | lin. ft. |
| Telephone Lines | 35 | Miles |
| Cattle Guards | 12 | each |
| Truck Trails | 58 | miles |
| Clearing channels | 33,038 | cu. yds. |
| Earth excavation | 301,215 | cu. yds. |
| Rip Rap | 34,680 | sq. yds. |
| Water Control Structures | 35 | each |
| Masonry, W. Control Str. | 2,072 | cu. yds. |
| Concrete Walks | 414 | lin. ft. |
| Marking Boundaries | 116 | miles |
| Landscaping | 2 | acres |
| Stone Walls | 40 | rods |
| Reservoirs, water | 2 | each |
| Pipe lines | 138 | lin. ft. |

In addition to the improvements which have been listed, a large amount of time was devoted to the razing of undesirable structures and to general cleanup work which does not show during an inspection of the area.

Water Control Improvements



Two Views of the Bulwar of Malheur's Water
Control System--P Ranch Diversion Dam



WATER CONDITIONS

The early indications for ample water supply for the Refuge were excellent from the Blitzen River, but the snow readings from the Silvies River watershed indicated that the water supply from this source was only about forty per cent of normal, consequently no water was expected from this source for the Refuge.

The run-off from the Blitzen watershed, however, was anything but normal, in that at no time did we have a flood condition. Water measurements showed 148 second feet of water coming into the valley from the Blitzen River above the upper division of the diversion dam, which amount held up until the latter part of June when it fell off rapidly and by the middle of July the water reached the stage which would ordinarily be expected about September 1 to 15. Ample water was available, however, to fill all the ponds which were developed in the Blitzen Valley and also to pass a fair portion to the Lake area, but the late water was insufficient for the maintaining of these ponds to the desired standard.

To aid in use planning of the available water, two new snow courses have been established at the head of the Blitzen River, one at seven thousand feet elevation and one at eight thousand feet elevation. This was done in cooperation with the Bureau of Agricultural Engineering. Measurements are to be taken at these courses about April 1 of each year. These measurements, coupled with the gauging station recordings, will give us data for more detailed planning of our water use over a period of years. The gauging station referred to has been located in the Blitzen River proper.

Units 1, 2, and 8, received water early and as a result, the use of these areas by the early migrants and early nesting species was quite evident. Units 7 and 9, which received water from other than the Blitzen source, were rather late in filling and early nesting conditions in these units were not the best. Units 3 and 4 were excellent for geese, and a large number of ducks also used these two areas, but here again the lateness of the water's arrival was reflected.

Much better use was obtained from the available water this year owing to the facilities which have been constructed to properly handle the water upon its arrival. Another year will place the area as a whole in much better condition to handle the season's run-off.

Watershed of Blitzen



Steens Mountains--Note
Gorge in Background

LAW ENFORCEMENT

The location of the Malheur Migratory Waterfowl Refuge is fortunate in that it is located far from any city center and away from industrial concentration.

While an adequate patrol has been maintained by the three Range Riders, Refuge personnel and B.C.W. employees, not a single violation of game laws has been noted.

Fence cutting and letting in trespass stock has been curbed and without doubt by the passing of another year such practice will be practically a thing of the past.

Waiting



Cattle Outside Refuge Fence
Ready whenever Gate May be
Left Open

Malheur's Water Source



Where the All-Important Blitzen
Begins.

(Steens Mountains)